

REMARKS

Summary

Claims 1-10, 12-14 and 17-33 stand in this application. Claims 11, 15 and 16 have been canceled without prejudice. No new matter has been added. Favorable reconsideration and allowance of the standing claims are respectfully requested.

35 U.S.C. § 102

At page 2, paragraph 2 of the Office Action claims 6-7, 10 and 13 stand rejected under 35 U.S.C. § 102 as being anticipated by United States Patent Number (USPN) 6,321,276 to Forin ("Forin"). Applicant respectfully traverses the rejection, and requests reconsideration and withdrawal of the anticipation rejection.

Applicant respectfully submits that to anticipate a claim under 35 U.S.C. § 102, the cited reference must teach every element of the claim. *See* MPEP § 2131, for example. Applicant submits that Forin fails to teach each and every element recited in claims 6-7, 10 and 13 and thus they define over Forin. For example, with respect to claim 6, Forin fails to teach, among other things, the following language:

a first virtual interface (VI) work queue pair coupled to the host to establish a VI channel between the host and the remote node of the local network ... wherein the remote node comprises a second work queue pair and wherein the VI channel is established by associating the first work queue pair with the second work queue pair.

According to the Office Action, this language is disclosed by Forin at column 15, lines 37-43 and column 17, lines 32-51. Applicant respectfully disagrees. Forin at the given cites, in relevant part, states:

Each virtual interface 106 may comprise a send queue 107 and a receive queue 108. In order to request an I/O operation, the VI user agent I/O posts descriptors to the send and receive queues. A descriptor is a data structure specifying information to assist the recoverable I/O request processor 60a of the VIA network interface adapter 100 to process an I/O request... (col. 15, lines 37-43).

...the recoverable I/O request processor receives a pointer to the descriptor corresponding to the send () operation. The pointer may have been previously posted in the send queue by the VI user agent In step ST2, the recoverable I/O request processor attempts to translate the virtual memory address of the descriptor using page tables local to the VIA network interface adapter. The recoverable I/O request processor 60a then determines whether the translation was successful. (step ST3) If the translation was successful, the recoverable I/O request processor processes the send () request. (col. 17, lines 32-42).

Applicant respectfully submits that Forin fails to disclose, teach or suggest first and second work queue pairs at the first and remote nodes, respectively, "wherein the connection-oriented VI channel is established by associating the first work queue pair with the second work queue pair," as recited in claim 6. Furthermore, as correctly noted in the Office Action on pages 7, 12, 15 and 18, Forin also fails to disclose, teach or suggest a VI channel connection established between a first node and the remote node in the local network based on a local physical address of the remote node, as recited in claim 6.

Consequently, Forin fails to disclose all the elements or features of the claimed subject matter. Accordingly, Applicant respectfully requests removal of the anticipation rejection with respect to claim 6. Furthermore, Applicant respectfully requests withdrawal of the anticipation rejection with respect to claims 7, 10 and 13, which

depend from claim 6 and, therefore, contain additional features that further distinguish these claims from Forin.

35 U.S.C. § 103

At page 5, paragraph 3 of the Office Action claims 1-5, 8-9, 12 and 31-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Forin in view of US Patent Publication Number 2002/0062402 to Regnier et al. ("Regnier"). Applicant respectfully traverses the rejection, and requests reconsideration and withdrawal of the obviousness rejection.

The Office Action has failed to meet its burden of establishing a *prima facie* case of obviousness. According to MPEP § 2143, three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP 706.02(j).

As recited above, to form a *prima facie* case of obviousness under 35 U.S.C § 103(a) the cited references, when combined, must teach or suggest every element of the claim. See MPEP § 2143.03, for example. Applicant respectfully submits that the Office Action has not established a *prima facie* case of obviousness because the cited references,

taken alone or in combination, fail to teach or suggest every element recited in claims 1-5, 8-9, 12 and 31-33. Therefore claims 1-5, 8-9, 12 and 31-33 define over Forin and Regnier whether taken alone or in combination. For example, claim 1 recites the following language, in relevant part:

a first work queue pair comprising descriptors to describe data to be transmitted from a first node to a remote node of a local network and to describe where to store data received from the remote node to **establish a connection-oriented virtual interface (VI) channel between the first node and the remote node in the local network based on a local physical address of the remote node**, wherein the remote node comprises a second work queue pair and wherein the connection-oriented VI channel is established by associating the first work queue pair with the second work queue pair.... (emphasis added).

Applicant respectfully submits that claims 1, 31 and 33 recite features similar to those recited in claim 6. Therefore, Applicant respectfully submits, as discussed above regarding claim 6, that claims 1, 31 and 33 recite language not disclosed by Forin. Accordingly, Applicant respectfully requests removal of the obviousness rejection with respect to claims 1, 31 and 33, and claims 2-4, 8-9 and 32 that depend from claims 1, 6 and 31 respectively, and therefore contain additional features that further distinguish these claims from Forin, for reasons analogous to those presented above with respect to claim 6.

Furthermore, according to the Office Action, the missing language of claim 1 is disclosed by Regnier at paragraphs 0021, 0022, 0035 and claim 12 on pages 4-5.

Applicant respectfully disagrees. Regnier at the given cites, in relevant part, states:

when a VI NIC processes a descriptor it uses virtual address 800 and the associated memory handle 802 to generate a protection index 806 via address operator 804.

Protection index 806 is an index into TPT 514. From the identified TPT entry, the physical address associated with virtual address 800 may be obtained.... the described mechanism allows memory address translation across arbitrary physical page crossings within a memory region as long as the pages of the memory region are contiguous in virtual address space, i.e., are virtually contiguous. (paragraph 0035).

A method for transferring a message between two processes comprising: receiving a message descriptor having a virtual address associated with the message and a memory handle associated with a first process executing on a first computer system; retrieving a physical address and a protection tag using the virtual address and the memory handle; and transferring the message to a location specified by the physical address and associated with a second process executing on a second computer system.... (claim 12, pages 4-5).

By way of contrast, the claimed subject matter teaches “establish[ing] a connection-oriented virtual interface (VI) channel between the first node and the remote node in the local network based on a local physical address of the remote node.” Regnier, at the given cites, arguably, teaches receiving a message descriptor with a virtual address associated with a first process, retrieving a physical address using the virtual address and transferring the message to a location specified by the physical address. There is no mention in the cited portions of Regnier of establishing a VI channel between the first node and the remote node based on a local physical address of the remote node. Applicant respectfully submits that the teaching of Regnier is different than the above recited language of claim 1. Therefore, Regnier fails to disclose, teach or suggest the missing language. Consequently, Forin and Regnier, whether taken alone or in combination, fail to disclose, teach or suggest every element recited in claim 1.

Furthermore, if an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious. *See* MPEP § 2143.03, for example. Accordingly, removal of the obviousness rejection with respect to claim 1 is respectfully requested. Claims 2-5 also are non-obvious and patentable over Forin and Regnier, taken alone or in combination, at least on the basis of their dependency from claim 1. Applicant, therefore, respectfully requests the removal of the obviousness rejection with respect to these dependent claims.

Moreover, independent claims 6, 31 and 33 recite features similar to those recited in claim 1. Therefore, Applicant respectfully submits that claims 31 and 33 are not obvious and are patentable over the Forin and Regnier, taken alone or in combination, for reasons analogous to those presented with respect to claim 1. Accordingly, Applicant respectfully requests removal of the obviousness rejection with respect to claims 31 and 33. Furthermore, Applicant respectfully requests withdrawal of the obviousness rejection with respect to claims 8-9, 12 and 32 that depend from claims 6 and 31 respectively, and therefore contain additional features that further distinguish these claims from Forin and Regnier, taken alone or in combination.

At page 13, paragraph 4 of the Office Action claims 14 and 17-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Forin in view of Regnier and further in view of US Patent Publication Number 2002/0016926 to Nguyen et al. ("Nguyen"). Applicant respectfully traverses the rejection, and requests reconsideration and withdrawal of the obviousness rejection.

At page 21, paragraph 5 of the Office Action claims 27-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Forin in view of Nguyen. Applicant

respectfully traverses the rejection, and requests reconsideration and withdrawal of the obviousness rejection.

Independent claims 14, 21 and 27 recite features similar to those recited in claim 1. Applicant respectfully submits that Nguyen fails to remedy the deficiencies of Forin and Regnier discussed above. Therefore, Applicant respectfully submits that claims 14, 21 and 27 are not obvious and are patentable over the Forin, Regnier and Nguyen, taken alone or in combination, for reasons analogous to those presented with respect to claim 1. Accordingly, Applicant respectfully requests removal of the obviousness rejection with respect to claims 14, 21 and 27. Furthermore, Applicant respectfully requests withdrawal of the obviousness rejection with respect to claims 17-20, 22-26 and 28-30 that depend from claim 14, 21 and 27 respectively, and therefore contain additional features that further distinguish these claims from Forin, Regnier and Nguyen, taken alone or in combination.

For at least the reasons given above, claims 1-10, 12-14 and 17-33 are non-obvious and represent patentable subject matter in view of the cited references, whether taken alone or in combination. Accordingly, removal of the obviousness rejection with respect to claims 1-10, 12-14 and 17-33 is respectfully requested. Further, Applicant submits that the above-recited novel features provide new and unexpected results not recognized by the cited references. Accordingly, Applicant submits that the claims are not anticipated nor rendered obvious in view of the cited references.

Applicant does not otherwise concede, however, the correctness of the Office Action's rejection with respect to any of the dependent claims discussed above. Accordingly, Applicant hereby reserves the right to make additional arguments as may be

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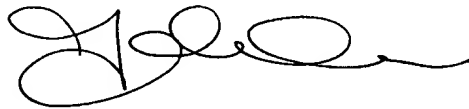
necessary to further distinguish the dependent claims from the cited references, taken alone or in combination, based on additional features contained in the dependent claims that were not discussed above. A detailed discussion of these differences is believed to be unnecessary at this time in view of the basic differences in the independent claims pointed out above.

It is believed that claims 1-10, 12-14 and 17-33 are in allowable form.
Accordingly, a timely Notice of Allowance to this effect is earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present patent application.

Respectfully submitted,

KACVINSKY LLC



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Under 37 CFR 1.34(a)

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